WHAT IS CLAIMED IS:

1. A printer forming halftone spots in cells each having a plurality of pixels by irradiating an exposure beam, said printer comprising:

a halftone processor for converting M-bit image data into N (M > N)-bit drive pulse width data for driving said exposure beam, said halftone processor including:

a threshold matrix including a plurality of threshold values corresponding to said plurality of pixels;

a converter circuit for comparing said each of threshold values output from said threshold matrix with said image data after superposing noise to other of said each of threshold values and said image data, to thereby generate drive pulse width data in accordance with said comparison results; and

a pulse position determining circuit for determining a position of a drive pulse for a pixel under processing in accordance with drive pulse width data of pixels adjacent to said pixel under processing;

wherein a drive pulse signal is generated at said determined drive pulse position according to said drive pulse width data.

2. A printer according to claim 1, wherein said converter circuit superposes noise on said plurality of threshold values, and compares said plurality of threshold values on which said noise is superposed with said image data.

3. A printer according to claim 2, wherein said plurality of threshold values are arranged at irregular intervals and a noise is superposed on said plurality of threshold values.

4. A printer according to claim 1, wherein said adjacent pixels are a plurality of pixels around said pixel, right and left pixels of said pixel, or a pixel processed just before said pixel under processing.

5. A printer according to claim 2, wherein said converter circuit includes adders for adding said noise to said plurality of threshold values output from said threshold matrix, wherein the threshold values of said threshold matrix are selected such that neither carry nor borrow is generated in said adders.

6. A printer according to claim 5, wherein said noise is a positive noise, and a maximum threshold value output from said threshold matrix is selected to be equal to or smaller than a value resulting from a subtracting operation of a maximum amplitude of said noise from a maximum value of said image data.

7. A printer according to claim 5, wherein said noise is a negative noise, and a minimum threshold value output from said threshold matrix is selected to be equal to or larger than a value resulting from an adding operation of a maximum amplitude of said

noise to a minimum value of said image data.

8. A printer forming halftone spots in cells each having a plurality of pixels by irradiating an exposure beam, said printer comprising:

a halftone processor for converting M-bit image data into N (M > N)-bit drive pulse width data for driving said exposure beam, said halftone processor including:

a threshold matrix including a plurality of threshold values corresponding to said plurality of pixels; and

a converter circuit which superposes noise to a plurality of threshold values output from said threshold values with said image data, and generates drive pulse width data in accordance with said comparison results;

wherein said plurality of threshold values are arranged at irregular intervals, and a noise is applied to said plurality of threshold values.

9. A printer according to claim 8, wherein said converter circuit includes adders for adding said noise to said plurality of threshold values output from said threshold matrix, wherein the threshold values of said threshold matrix are selected such that neither carry nor borrow is generated in said adders.

10. A printer according to claim 9, wherein said noise is

a positive noise, and a maximum threshold value output from said threshold matrix is selected to be equal to or smaller than a value resulting from a subtracting operation of a maximum amplitude of said noise from a maximum value of said image data.

11. A printer according to claim 9, wherein said noise is a negative noise, and a minimum threshold value output from said threshold matrix is selected to be equal to or larger than a value resulting from an adding operation of a maximum amplitude of said noise to a minimum value of said image data.

12. An image processing device forming halftone spots in cells each having a plurality of pixels, said image processing device comprising:

a halftone processor for converting M-bit image data into N (M > N)-bit drive pulse width data for driving said exposure beam, said halftone processor including:

a threshold matrix including a plurality of threshold values corresponding to said plurality of pixels;

a converter circuit for comparing said each of threshold values output from said threshold matrix with said image data after superposing noise to other of said each of threshold values and said image data, to thereby generate drive pulse width data in accordance with said comparison results; and

a pulse position determining circuit for determining a

position of a drive pulse for a pixel under processing in accordance with drive pulse width data of pixels adjacent to said pixel under processing;

wherein a drive pulse signal is generated at said determined drive pulse position according to said drive pulse width data.

13. An image processing device forming halftone spots in cells each having a plurality of pixels, said image processing device comprising:

a halftone processor for converting M-bit image data into N (M > N)-bit drive pulse width data for driving said exposure beam, said halftone processor including:

a threshold matrix including a plurality of threshold values corresponding to said plurality of pixels; and

a converter circuit which superposes noise to a plurality of threshold values output from said threshold values with said image data, and generates drive pulse width data in accordance with said comparison results;

wherein said plurality of threshold values are arranged at irregular intervals, and a noise is applied to said plurality of threshold values.